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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,697	09/21/2001	Duane Joseph Buening	DP-304591	4272

7590                    09/24/2002  
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EXAMINER
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LE, DANG D

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 09/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/960,697	BUENING ET AL.
	Examiner Dang D Le	Art Unit 2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on \_\_\_\_.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-9 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) 1-9 is/are rejected.  
 7) Claim(s) \_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 21 September 2001 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 11) The proposed drawing correction filed on 24 January 2002 is: a) approved b) disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.  
 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.  
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
 a) The translation of the foreign language provisional application has been received.  
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ .	6) <input type="checkbox"/> Other: ____ .

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2, 3, 8 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 2, 3, 8 and 9, these claims are indefinite because it is not clear what "the number of rotor pole pairs", "the number of pole pairs", "zero sequence current" and "a short pitch wind of the wire" respectively shown in the claims are.

### ***Claim Objections***

3. Claim 7 is objected to because of the following informalities: delete "five," in line 2. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Auinger et al. in view of Stroppa et al.

Regarding claim 1, Auinger et al. show an alternating current (AC) generator comprising:

- A stator assembly (Figures 6A and 6B);
- Said stator assembly including stator slots/teeth and a 5-phase winding (17 or 20, A-C phases) distributed through and among said stator teeth;
- A plurality of rectifiers (10) to rectify output voltages generated by the 5-phase winding.

Auinger et al. do not show :

- A casing defining an accommodation space therein;
- A stator assembly supported in said accommodation space in said casing;
- A rotor assembly including a plurality of pairs of opposed pole members rotatably disposed inside said stator assembly;
- Said pairs of pole members configured for energization in opposite magnetic polarity.

For the purpose of making an alternator with a claw tooth rotor, Stroppa et al. show:

- A casing (1) defining an accommodation space therein;
- A stator assembly (30) supported in said accommodation space in said casing;
- A rotor assembly (37) including a plurality of pairs of opposed pole members (35, 36) rotatably disposed inside said stator assembly;
- Said pairs of pole members configured for energization (due to coil 39) in opposite magnetic polarity.

Since Auinger et al. and Stroppa et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide a casing to support the stator with a claw tooth rotor as taught by Stroppa et al. for the purpose discussed above.

Regarding claims 2-4, it is noted that it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the number of stator slots S be represented by  $S = 10*n*p$  where n is any integer and p is the number of rotor pole pairs, to number said stator slots 10 times the number of pole pairs or said stator slots 60, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 5, it is noted that Stroppa et al. also show a majority of the phase winding wound around 3 stator teeth then advanced 3 stator teeth and again wound around 3 stator teeth and repeated until all the stator teeth are wound (Figure 7). Consequently, it is noted that it would have been obvious to one having ordinary skill in the art at the time the invention was made to wind a majority of the phase winding around five stator teeth then to advance five stator teeth and again wind around five stator teeth and repeat until all the stator teeth are wound.

Regarding claim 6, it is noted that Stroppa et al. also show each phase winding being woven through a slot, turned out and run along said 3 stator teeth, woven through an adjacent slot, turned out and run along side 3 stator teeth, and repeated to configure a wave wind until all the stator teeth are included.

Regarding claim 7, it is noted that Stroppa et al. also show each phase winding of the 3-phase windings being offset two stator teeth from the adjacent phase winding.

Regarding claim 8, it is noted that Auinger et al. also show a diode pair to capture zero sequence current.

Regarding claim 9, it is noted that Stroppa et al. also show the stator being wound with a short pitch wind of the wire.

***Information on How to Contact USPTO***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (703) 305-0156. The examiner can normally be reached on Monday through Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

DDL  
September 20, 2002

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*Samy Lk*